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This is a communication from the examiner in charge of your application
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 4-14-89 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), -0- days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☒ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☒ Claims 14 and 16-56 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims 1-13 and 15 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 14 and 16-56 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☒ The corrected or substitute drawings have been received on 5-18-89. Under 37 C.F.R. 1.84 these drawings are ☒ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev.9-89)

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office Action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 14 and 16-56 are rejected under 35 U.S.C. 103 as being unpatentable over Suste of record.

Suste only differs from that which is claimed in that Suste is silent on the function of "after a high level of one polarity has been selected." Clearly the designing of the circuitry to select the "one polarity" first rather that to select the "opposite polarity" first would have been obvious to a person of ordinary skill in the art at the time the invention was made, for the end result would be applying the two pulse waveforms at their selected times. The only constraint is that the selection be made before the time the pulses have to be applied to the electrodes. Suste while does not specify which level of polarity is selected first this is looked upon as not being critical to his invention. Note also that "selected" does not have the same meaning as applied.

With respect to the use of an inductor coupled to the panel electrodes for the charging and discharging of the panel capacitance. This would have been obvious, for in gas panel displays a pulse waveform is used and one well known

type of driver circuit is either a half-bridge inverter or a full-bridge inverter. In these type of inverter circuits the use of tank circuits are well known. The combination of an inductance with an capacitance forms a tank circuit and the tuning of this tank circuit to the pulse frequency does promote efficient operation of the inverter circuit. In summary the use of inverter circuit for a driver is well known and the forming of a LC tuned circuit is well known for more efficient operation and thus it would have been obvious to form such a circuit in the device of Suste.

Claim 14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the prior art invention as set forth in claims 1-29 of U.S. Patent no. 4,866,349 ('349).

Claim 14 of the instant application is only different by a matter of wording over the claims of '349. In fact for example claim 12 of '349 discloses all the limitations of claim 14 almost to the exact words and only differs in that claim 12 of '349 is more specific. In other words claim 14 is more broad than claim 12 of '349.

Claims 32-35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the prior art invention as set forth in claims 1-29 of U.S. Patent no. 4,866,349.

In the claims of U.S. Patent no. 4,866,349 ('349) the only difference between these claims and claims 32-35 is only a matter of wording. One example of this is in claims 32-33 the word "pixel" is used for cell. In gas panel displays

pixels or cells have the same meaning in many cases and would have been obvious to form such a cell as a pixel element. Another difference is the wording of how one applies a waveform to the address electrodes. Clearly the application of one of the pulse waveforms to the respective address electrode is "charging...(the)electrode...to a high level of one polarity. Claim 4 of '349 clearly discloses that information is displayed and this implies an information source. Claim 4 also clearly discloses that the controlling of the two pulse waveforms applied to the respective address electrodes is what makes the cells or pixel elements activate. Thus, the claims of '349 clearly set forth means to maintain one electrode at a high level while the other is of an opposite polarity. With respect to claims 33 and 35 the pulse generating means claimed in '349 clearly is means for enabling controllable discharging of said address electrode from a high level to said low level...after..." the information has been entered onto the display. Clearly when all the information has been entered in there is no more need to write any more information.

The obviousness-type double patenting rejection is a judicially established doctrine based upon public policy and is primarily intended to prevent prolongation of monopoly by prohibiting claims in a second patent not patentably distinct from claims in a first patent. In re Vogel, 164 USPQ 619 (CCPA 1970). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Applicant's arguments with respect to claims of record have been considered but are deemed to be moot in view of the new grounds of rejection. While the arguments are considered moot the Examiner has a few comments on the Suste reference of record and the present claims. The present claims in the case do not convey what the Examiner believes is an important point of the invention. Throughout the specification

applicant discusses the use of the same type of transistor for both the X and Y electrodes and that this is possible do to Applicant's way of exciting these address electrodes. It appears that all of the X electrodes are charged through the driver transistors while these transistors are in an non-conductive state and then the "selection" of the electrodes that are to remain energized is preformed followed by the discharging of the non selected electrodes. Claim 18 for example states "means for charging an address electrode". This is not the charging of all the address electrodes of one array. Also the means for charging or applying a high level pulse with the recited means for selecting whether to maintain the high level is just the means that are present in a driver circuit for a gas discharge panel. In a controlled pulse generator, this type of circuit charges the electrodes and selects whether to maintain the high level of the pulse being applied. In other words the controlling of the pulse duration maintains or discontinues the high level of voltage. It is the Examiner's opinion that the present claims are broad enough to read on Suste and the Examiner can not find in any of the references of record the charging of all the address electrodes of one array with the selective discharging of the non-selected electrodes which is done before the opposite pulse is applied.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Shingleton whose telephone number is (703) 308-0712. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 557-3311.

MBS
Shingleton/mbs
01 November 1990

EUGENE R. LAROCHE
SUPERVISORY PATENT EXAMINER
GROUP ART UNIT 252